

I dette nummer kan du læse om følgende:

- *Amatørtræf i Struer*
- *Gratis E-bøger*
- *Novice Elektronik del 6, Halvledere*
- *Ham Radio Deluxe*
- *Ny AM Radiokanal på mellembølge*
- *Nye produkter*
IC705
SDR play
- *TX-Factor*
- *DX-Peditioner*
- *QST februar*
- *Radcom februar*
- *Udbredelsesforhold*
- *PSK Contest*
- *Jeg har ikke tid*

AMATØRTRÆF I STRUER

Når du læser dette, skulle Amatørtræf Struer gerne være i fuld gang ☺
Forhåbentlig er der mødt en masse glade Radioamatører og andet elektronik folk frem i lokalerne i Resen gamle skole. Og forhåbentlig er der godt gang i deling af erfaringer, sladder og andet godt, og der forhåbentlig gang i salget af diverse effekter fra OZ3EDR's gemmer.

Når jeg skriver "forhåbentlig" ja så skyldes det at dette nummer er dugfrisk fra trykkeren her søndag morgen. Så derfor ved jeg selvfølgelig ikke hvor mange der kommer, men OZ3EDR har da en formodning om at der kommer en hel del til dette arrangement, som jo byder på en del forskellige små workshops og foredrag og du har sikkert set programmet.

Aktiviteter

- Kl. 11:00 OZ2OE, Ole, Foredrag/workshop om QO-100**
- Hele dagen: OZ7ADZ, Niels, Workshop med Arduino og Raspberry**
- Kl. 13.00: OZ0J, Jørgen foredrag om Clublog programmet**
- Hele dagen: OZ2JKJ Jesper med Raspberry arkade maskine**
- Hele dagen: OZ5KR, Kristian demo af diverse VNA'er**
- Hele dagen: OZ9WTN, udstilling af regnemaskiner og tilbehør**

Derud over har Viggo Kristensen åben i "Radiomuseet" og Struerhåndbryg er på pletten med både ØL og pølser. Sidst men ikke mindst, så er der kaffe på kanden.

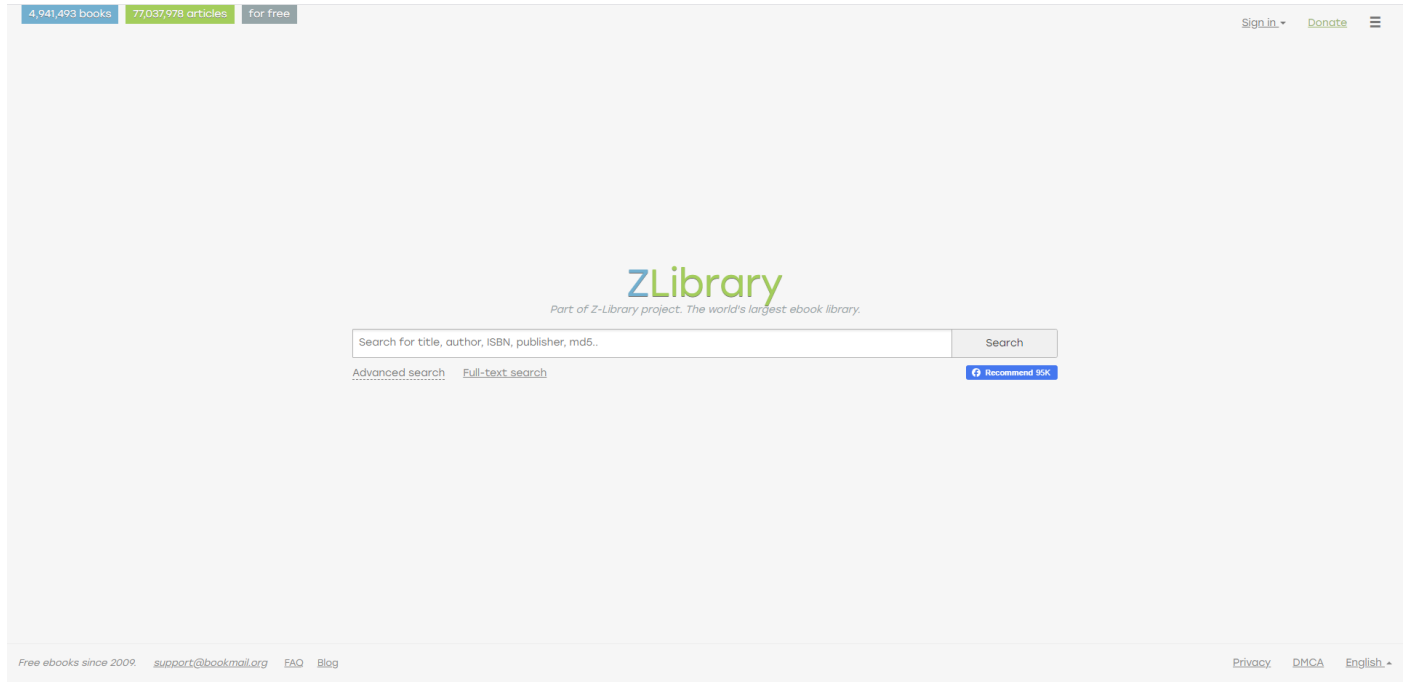
Dette nummer er altså også udkommet på tryk, så de der er mødt op på dagen, kan få et eksemplar af OZ3EDR's nyhedsbrev med hjem. Normalt er det kun udgivet på elektronisk form (PDF)

Der skal selvfølgelig også her gøres reklame for "Vildsund marked", som traditionen tro bliver afholdt 29-2-2020 på Øster Vild Færgetro. Her vil der som altid være mulighed for både at købe og sælge diverse effekter. Der vil også være mulighed for at indtage et måltid mad, som sikkert vil være flæskkesteg, som traditionen byder, til amatør venlige priser.



Oz1AHV, Finn har gjort opmærksom på at det er muligt at downloade, en masse forskellige bøger, b.la. omkring elektronik fra denne side

<https://b-ok.cc/s/>



Som det kan ses, er der næste 5 millioner forskellige bøger og ca. 77 millioner forskellige artikler. Så der er rigelig at gå i gang med. Prøv blot at søge på "Raspberry", det giver ca. 500 bøger og lige så mange artikler.

Prøver du med "Ham Radio" ja så får du også ca. 500 hits ☺ "Rothammel" giver også bonus, der er 2 bøger, en på engelsk og en på Ungarsk. SDR giver også pote, så jo det er bare at gå igen, der er mange timers god underholdning.

Er du nu mere til skønlitteratur eller krimier, ja så er det også en mulighed, Både Sara Blædel og Jusi Adler Olsen er at finde, godt nok kun på tysk og engelsk, men det kan jo så være en god grund til at få opfrisket sprogkundskaberne.



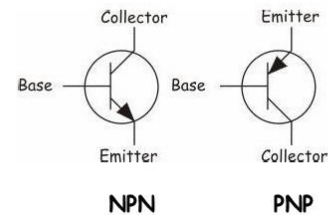
Er man til biler er der også masser af muligheder, både for at få reparations håndbøger, men også lidt mere kuriøse fund, fx denne bog nogle VW'er fra krigen tid. Det bedste ved det hele er jo at det er gratis og uden reklamer.

NOVICE ELEKTRONIK DEL 6. HALVLEDERE

I del 5 fortalte jeg lidt om halvleder-kategorien dioder. Denne gang vil jeg forklare lidt om en anden stor gruppe halvleder, nemlig transistoren. En god ven beskrev en gang en transistor som en vandhane: ”Der hvor vandhanen skrues fast op vandrøret, det er collector. Der hvor vandet løber ud, det er emitter og hanen som bestemmer hvor meget der løber ud, det er basis”. Det kan jo ikke forklare mere enkelt.

Bipolar transistor

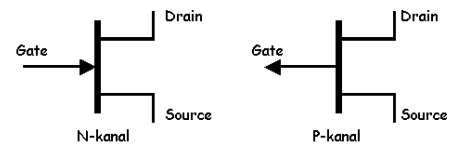
Gruppen af transistor kaldet bipolar transistor er nok den mest anvendte gruppe af transistorer. Der findes to hoved varianter af denne transistor. NPN og PNP-varianterne. NPN-transistoren bruges ved positive spændinger og PNP bruges til negative spændinger. Som det kan ses på figur 1 så er der en lille pil på emitter benet som viser hvilken vej strømmen løber. En bipolar transistor har den man kalder en strøm forstærkning. Det vil sige at ved at sende en lille strøm ind på Basis, kan man kontrollere en strøm som er 100 gange større ud af emitter. Transistoren vil altid sørge for at der er samme spænding mellem basis og emitter (kaldet basis – emitter spændingen) Den er typisk på 0.6V, men det kan man se i databladet for den transistor man har valgt. Hvor meget strøm der skal bruges ind i basis for at få det nødvendige output i emitter bestemmes af transistorens forstærkning, kaldet hFE. Er hFE = 100 og vi trækker 1 ampere ud af emitter, så skal der altså bruges 0,01 ampere ind i basis for at det kan lade sig gøre.



Figur 1

FET transistor

FET transistorer findes i mange typer som er velegnet til rigtig mange ting. Man kalder også FET transistor for spændingsforstærkende transistorer, men tænker man på den som en spændingsstyret variable modstand er det lidt nemmere at forstå.



Figur 2

Drain forbindes til forsyningen og tages ud igen på Source. Ved at ændre spændingen på gate kan man ændre impedansen i transistoren og derved styre den spænding som kommer ud af source. Normalt kan Gate spændingen variere 4-5 volt fra lukket til åben, man her skal man igen tjekke sit datablad for at finde de rigtige informationer, som passer til ens valg.

Lad mig understrege at dette er en meget forenklet forklaring på FET transistor, og jeg vil anbefale dig at læse videre på det store bibliotek kaldet internettet.

Formål

Der findes en transistor til et hvert formål. Nogle kan klare en høj frekvens så de kan bruges i vores VHF og UHF radioer. Andre kan klare en meget stor strøm, de er gode i vores store strømforsyninger og en tredje gruppe har en meget lave indre støj, de er rigtig gode i vores forstærkere.



Figur 3 Et lille udpluk af de mange typer der findes

Kan det regnes?

Ja, naturligvis. Forstærkningen er nok det mest oplagte, men også andre ting som effekt afsættelsen er ofte vigtig når man arbejder med transistorer.

Det var det sidste kapitel i min lille serie om elektronik komponenter på begynder niveau. Jeg håber du har fundet det interessant og har lyst til at lære mere på egen hånd. Jeg forventer ikke at du nu er uddannet elektronik teknolog, men jeg håber at du har fået en baggrunds viden som har klædt dig på til at studerer videre på egen hånd, eller med hjælp fra andre i din omgangskreds.

Tak fordi du læste med!

Vy 73 de OZ7ADZ, Niels

Stor tak til Oz7ADZ, Niels for hans artikelserie om Novice elektronik. Jeg håber at mange nybegyndere ud i elektronikken kan få noget ud af disse fine artikler, som beskriver de mest gængse komponenter. Forhåbentlig har i fået den viden som, som for mange af os "gamle" er en selvfølge og som vi ikke er særlig gode til at formidle.

Jeg kan her løfte sløret for at Niels er blevet selvstændig ud i elektronikken, med egen firma. Tillykke med det





HAM RADIO DELUXE SOFTWARE

The Radio Amateur's Best Asset

Her er sidste nyhedsbrev fra Ham Radio De luxe, som er udsendt til alle der abonnerede på den. Jeg har valgt at bringe den i hele dens længde og ordlyd.

Greetings from the "Land Down Under!"

I'd like to take some time to discuss with you what's going on with HRD Software. Typically, I write these newsletters in the 3rd person but; today, I'm writing a personal message from me to you.

In this newsletter, I plan to cover a quick look at 2019, I'll share a little HRD history, address some changes in company infrastructure additional to some rumors that I've gotten wind of, and give you some insights into what we're anticipating in the next few weeks.

Looking back at 2019

We had six releases in 2019 and a total of 309 development changes - most of these changes were in direct response to customer requests. We were also able to view errors in a Microsoft dashboard that allowed us to get ahead of some customer requests and be more proactive at identifying and correcting errors.

I'm really pleased with that progress.

That being said, we did encounter a few bumps in 2019. In the interest of total transparency, here's a quick list:

- FT4 – We were never able to get this coded. The delays are 100% related to our inability to describe it in such a way that a developer could code it. We sought (and received) a lot of advice along the way and; great news, we've finally identified what needs to be done.

- Slow callsign lookups when using QRZ's XML subscription – The 6.7 release contained a complete (and necessary) rewrite to the callsign lookup code. Following the release, we received reports of slow callsign lookups when customers were using QRZ's XML service. The issue only affected about 15% of users and it took us longer than I'd hoped to identify what turned out to be a typo in the two lines of code that reference the DNS entry for QRZ's XML service. Glad we got that sorted out.

- We've had reports of an error in DM-780 for some users that says, "Encountered an improper argument." We're hard at work to track the cause of this issue down.

I hope you, our clients, understand that your satisfaction is our priority and we are always hard at work to improve our product. I've listened to your feedback regarding the 6.7 release and want you to know that we take it seriously. Since Randy (KOCBH) and I became the sole owners/partners in the company in January 2017, we have dramatically improved the quality of our software and intend to continue to do so.

A little HRD history

When Simon Brown (then HB9DRV, now G4ELI) announced his intentions to stop working on Ham Radio Deluxe so he could work on other things, I was quick to contact him as I didn't want to see the software abandoned. We negotiated a deal in late 2011 that enabled us to acquire the intellectual property and the rights to Ham Radio Deluxe "past, present, and future."

At that time, Randy and I both had full-time jobs and no intention of running the company. Randy is a really smart technical guy with experience running the finances of companies like HRD. I focused my time on finding new developers and collecting a list of the most important things that customers wanted to see fixed. We considered ourselves "part-time" and brought in a third partner to run the day-to-day operations.

In the years that followed, the company lost money every year and some employees accumulated months of back pay. Customers were insulted, mistreated, and driven away.

Finally, in January of 2017, Randy and I became sole owners of the company and assembled a 6-month plan to increase our involvement and rectify the situation. By the end of 2017, all back-payments to employees had been paid, all outstanding debt repaid, and the company was profitable for the first time ever.

As our cash-flow became positive for the first time, we took the profits and reinvested them into product development in two ways: First, we invested much more on software developers - employing 3 developers in 2019. Second, we purchased radios and rotors so we could better test and develop the software.

For the duration of this growth for the company, I have continued to hold a full-time job as a leading IT executive, often working on HRD during my nights and weekends. On this note, I'd like to address a few rumors and concerns that have been brought to my attention.

We work remote

Many of you have inquired about Tammy (KB9YHU) and I's recent move to Brisbane, Australia. I want to reassure each of you that this new position, nor the location of my pillow, has any bearing on the continued progress of Ham Radio Deluxe. I had a day job before, I have a day job now, and Ham Radio Deluxe has always employed a remote staff of folks not only across the United States, but also around the world.

On a local front; though, we did start involving our oldest daughter Lindy (KB9PIE) in the company a little more than a year ago. She has a background in communications and marketing with an MBA from Texas Christian University. She's one smart cookie and; over the last six months, we have transitioned Tammy's management duties to her. Where sales, marketing, and customer support are concerned, she's very much in-charge and has been very successful. She'll be with me at Hamcation in Orlando.

These changes have all been exciting for us and in no way influenced any of your frustrations with the latest release. The issue we had – to be honest – was trying to make changes that were too drastic and more complex than we anticipated. The complexity of the issues that arose absolutely created a backlog in development – but we're on top of it.

Regarding the developers

We have never employed developers on a full-time basis but; rather, brought in freelancers for this work. In 2019, three "core" developers contributed to releases. Toward the end of the year, one developer let us know he was moving on to work on another project so we began to transition his work to the remaining two. In his absence, I am also in the process of on-boarding some additional developers within the US and internationally.

Frankly, I'm not concerned about our development team and you shouldn't be either. We're going to take the same successful approach we've taken since mid-2017. It has worked quite well. Work like this is accomplished much better on a "project basis" than with full-time employees for a company of our size.

What are we doing now? What are the priorities? Who's working on them?

The development work that was done by one developer to create the 6.7 build was never completed. Currently, I have one of the other developers fixing and completing this work – which will address the issues that have been reported with the 6.7 release.

The immediate priorities are: find and fix this “encountered improper argument” error and finish the remaining callsign lookup changes. The slow QRZ lookup problem is solved.

Once those things are complete, we’ll get the software tested and we’ll publish it as a release.

I’ve had a lot of folks ask why we have a beta build on our website. The answer: because it’s more stable than the previous 6.7 release build. We just didn’t tag it as a “release” because I want these other two items fixed first. By the time we do the next 6.7 release, these two items will be the only additional content.

Our next priorities are:

- The remaining FT4 work for submode so that it works properly with LOTW
- Fix the remaining QSL labeling problems
- Obtain a Yaesu FTdx101D/MP to get it added to the software
- Make other tweaks like resizing rotor dials, etc.

There is no Ham Radio Deluxe “fan page” on Facebook

Finally, this message is – in part – a direct response to some of the vitriol that I’ve read recently on a so-called “fan page” on Facebook. Let’s be clear – that Facebook page is not a Ham Radio Deluxe “fan page.” It bears no resemblance to a fan page for anything except heckling.

It’s a fantastic source of misinformation.

No one on that page speaks for me or my company.

No one on that page gets inside information about what’s going on within HRD Software nor our priorities nor our business plan.

It’s managed by disgruntled former employees who have an “axe to grind” and seek only to harm our company’s reputation by spewing malice.

The best way for existing and prospective clients to interact with Ham Radio Deluxe is via our support page or our forum pages. We respect and appreciate our customers. We appreciate your support and look forward to the opportunity to speak with you directly.

In closing

We are grateful for the support of our customers and appreciate your patience. I would like to personally assure you that we have things under control and our priorities are in place.

Lindy and I will be at Hamcation in Orlando in a couple of weeks and the rest of our hamfest calendar is posted on our homepage. Come see us and talk with us directly. We’re looking forward to seeing you.

73 de Mike, VK4/WA9PIE

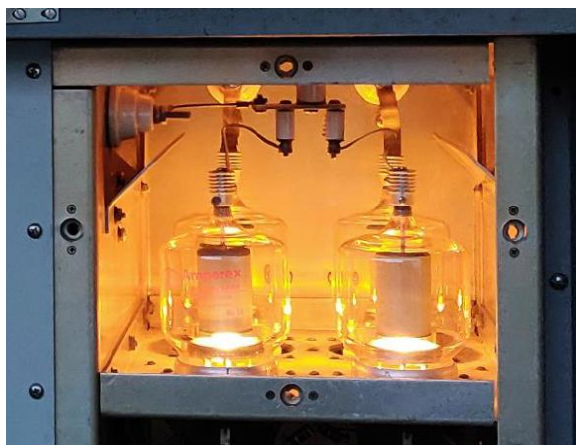
Nyhedsbrevet er et månedligt tidsskrift, som kun udkommer elektronisk og som udgives af OZ3EDR. Ansvarshavende redaktør er OZ1DCZ, Carsten Kobborg.

Kunne du tænke dig at modtage den direkte, i din mail boks, så send en mail til oz3edr@gmail.com, skriv ”Nyhedsbrev abonnent” i emnefeltet, og du vil efterfølgende modtage den direkte.

NY DANSK RADIOKANAL PÅ MB

Ikke at det har så meget med amatørradio at gøre, men Radio208, har fået tilladelse til at sende på den gamle "Radio Luxembourg" frekvens 1440KHz. Senderen står i Ishøj og har PT tilladelse til at sende med 500W, men de er begyndt lidt forsigtig, kun med 300W. Det betyder også at der ikke dækning i hele landet. Under gode forhold og med noget godt udstyr (og radioamatører har jo tip top udstyr) så skulle det nok være muligt at høre stationen. Der er godt nok en Saudi Arabisk station på 1440KHz, som sender med 1600KW, den kan godt give lidt problemer om aftenen.

Udstyret der bliver brugt er en Canadisk sender fra 1974, en CCA sender. Det er folk fra den gamle RCA fabrik der står bag CCA. Senderen er oprindeligt lavet til 1476KHz, men er blevet udstyret med en ny lokal oscillator der indeholder en TCXO til 14,400000 MHz. Den bliver så delt ned, først med 5 og derefter med 2. Herefter filtreres signalet så det bliver en fin sinus med en nøjagtighed bedre en 1ppm.



Sender-rørerne i Radio208's mellembølgesender stammer fra 1974 (Illustration: Stig Hartvig Nielsen)



(Illustration: Niels Dreijer)

Ophavsmanden til radio208 er Stig Hartvig Nielsen, som har arbejdet med radio i mange år, blandt andet hos Radio Viborg, Radio ABC og DR.

Antennen er en "sloping" dipol på 2X50meter fra en 74 meter mast, og enderne ender i 4 meter over jorden. Det er en dansk design.

Antenne er ophængt så den giver både en optimal jordbølge, og dermed god dækning i Københavns området. Men samtidig er der en god "Skyvave" udstråling, så Radio208 også kan nå langt ud i Europa i aften og nattetimerne. Senderantennen er doneret af Jens Christian Seeberg og et ny driverrør til CCA senderen er doneret af Niels Dreijer. Selve anlægget er installeret i en container



Radio208 kan også høres på nettet <http://www.radio208.dk/>

NYE PRODUKTER

Den her nye Icom som formodentlig kommer på gade i 2020 bliver da spændende at følge. QRP SDR Transceiver, som dækker alle bånd HF/VHF/UHF.

<https://qrznow.com/ic-705-qrp-sdr-transceiver-update-available-in-japan-around-april-2020/?fbclid=IwAR3l7c8L83covCpsdHiKIAR6isLNzAtJ9YEhiAvgSBryJDDi-pqAUuDgjLw>

<https://youtu.be/53grDV9ZRpo>

IC-705

There has been massive interest around the world about the new IC-705 QRP SDR transceiver since a concept model was shown at the Tokyo Hamfair 2019.

This new portable HF/VHF/UHF has many great features. Some of these are, an SDR platform, internal battery, GPS, Bluetooth and D-STAR, all in a compact and lightweight body. The Icom IC-705 uses the same 4.3" colour touch screen display as in the IC-7300 and IC-9700 featuring real-time spectrum scope and waterfall display.



HF/50/144/430 MHz ALL MODE IC-705 is born

Your New Partner for Field Operations

HF/50/144/430 MHz All Mode

From HF to 50/144/430 MHz*, you can enjoy a variety of bands in D-STAR DV, SSB, CW, AM and FM modes. The IC-705 receives continuously from the medium wave broadcast band to 144 MHz band. You can also enjoy FM broadcast and air band reception.

* 70 MHz band will be featured for the European version.

Large Touch Screen Color Display

The large 4.3 inch touch screen color display is the same size as the one used in the IC-7300 and IC-9700. It dramatically improves visibility and operability in the fields.

RF Direct Sampling System

The IC-705 uses the RF direct sampling method* matured in the IC-7300, IC-7610, and IC-9700. This method greatly reduces distortion. The high speed high resolution real-time spectrum scope and waterfall display are incorporated in a compact design for the first time in this class.

* Down-conversion RF sampling method for 25 MHz and above

Compact and Lightweight Design

"Base station radio" performance and functions are packaged in a compact size of approximately 20 cm, 7.9 in (W) x 8 cm, 3.1in (H) x 8.5 cm, 3.3 in (D). The weight is approximately 1 kg (excluding battery pack and antenna). Its compact and lightweight design enables you to hold it with one hand.

Max. Output Power 10 W (13.8 V DC), 5 W (BP-272)

Supports QRP/QRPP Operations

Despite being a portable radio, it achieves the maximum output power of 10 W with a 13.8 V DC external power supply. When the standard BP-272 Li-ion battery pack is used, operation at the maximum output power of 5 W is possible. True 5 watt QRP as well as 0.5 watt QRPs are supported.

Full Equipped D-STAR Functions

The IC-705 is fully equipped with functions to enjoy D-STAR comfortably, and the DR function and Terminal Mode/Access Point Mode. In addition, you send/receive and view saved photos using only the IC-705 without application software.

Real-Time Spectrum Scope and Waterfall Display

The IC-705 inherits the performance and functions of the highly-acclaimed IC-7300 and IC-9700 scopes. You can visually figure out the band condition and check clear frequencies. It takes you to the next level beyond traditional field operation.

BP-272 Battery Pack or 13.8 V DC External Power Supply

The BP-272 Li-ion battery pack comes with the IC-705. This is the same battery pack used in the IC-51 and IC-31 handheld transceivers. Of course, a 13.8 V DC external power supply can be used, too.

Bluetooth® and Wireless LAN

Bluetooth® and wireless LAN are built-in. They can be used for smartphone linking and remote control, and also for Bluetooth® headsets.

Antenna and SP-Mic Come Standard

A whip antenna for VHF/AHF and speaker-microphone come standard. The speaker-microphone is equipped with programmable buttons assignable to various functions, such as frequency adjustment and volume control.

GPS Antenna and GPS Logger

A high-performance GPS antenna is incorporated. In the D-STAR DV mode, you can send and receive location information while communicating. This high-performance GPS enables various functions such as GPS log function and repeater search function.

Optional Backpack, LC-192, Ideal for Field Operations

The IC-705 fits perfectly in the optional dedicated LC-192 multi-function backpack. It has various functions, such as holes for the antenna and holes for passing through coaxial cable and microphone cable. You can easily operate the IC-705 with it in the backpack.

microSD Card Slot

The IC-705 is equipped with a microSD card* slot that can be used for firmware upgrades, programming and so on, as well as voice recordings and saving GPS log data.

* microSD card is not supplied.

SDRPLAY

I sidste nummer af nyhedsbrevet bragte vi et lille indslag om SDRPlay's RDPdx SDR radio, i januar nummeret af Radcom fra RSGB, har G4WNC Mike Richards lavet en artikel, som jeg har fået lov af RSGB og G4WNC at videre bringe for nyhedsbrevets læsere. Jeg har samtidig lovet redaktøren af Radcom, Elaine G4LFM at viderebringe denne info: "This article is copyright of the Radio Society of Great Britain and reproduced with their kind permission".

Review

SDRPlay RSPdx

The SDRPlay RSPdx is the latest iteration of the SDRPlay range of low-cost, wide-band Software Defined Radios.

The new RSPdx is a multi-antenna port, 14-bit SDR with a continuous tuning range from 1kHz to 2GHz and a maximum spectrum bandwidth of 10MHz. The receiver has three software selectable antenna ports, all of which are usable down to 1kHz. Figure 1. Port A operates from 1kHz to 2GHz, whilst Port B covers the same frequency range, but includes a switchable Bias-T feed of 4.7V at up to 100mA. Both ports A and B use SMA connectors. The final antenna port employs a BNC connector and covers 1kHz to 200MHz. Housed in a sturdy metal box, the RSPdx uses a USB-B cable for power and communications with the host PC. A TCXO internal reference clock runs at 24MHz and provides 0.5ppm accuracy that can be trimmed to 0.01ppm. There is also an external reference socket on the rear panel that can be used to lock the RSPdx to an external 24MHz frequency standard such as the popular Leo Bodenar units from SDR-Kits. The filtering and operating modes of the RSPdx have been customised for improved LF performance without compromising the performance of the higher bands. One of the key additions is a new 500kHz low pass filter and the provision of notch and preselection filters on all three antenna inputs. There is also a new HDR (High Dynamic Range) operating mode that can be selected for frequencies below 2MHz.

Inside the RSPdx

SDRPlay have been developing their receivers over the past five years and refining the range in response to user feedback. At the heart of all

TABLE 1: RSPdx HDR bands.

Band	Frequency range
2200m	104-165kHz
630m	444-504kHz
160m	1.79MHz to 2.01MHz
LOW	-20Hz to + 520kHz
Full	1kHz to 1.75MHz
LFER	144kHz to 205kHz
NDBL	174kHz to 200kHz
NDBH	486kHz to 586kHz
LW	145kHz to 295kHz
MW	450kHz 1.75MHz



FIGURE 1: RSPdx has 3 antenna ports.

the SDRPlay receivers is the Mirics chipset that comprises the MSi001 wideband tuner and the MSi2500 combined Analogue to Digital Converter (ADC) and USB interface, Figure 2. Originally designed for set-top boxes, the SDRPlay team have worked wonders to get the best out of the Mirics chipset. As with all, low-cost, wideband SDR receivers, the secret to success is getting the filtering right. The LF through to MF bands

are a particular challenge because we have weak signals adjacent to high power broadcast stations. Examples of this can be seen on 7.0MHz in the evenings and the LF amateur bands on 136kHz and 436kHz. Without good quality band filtering, the receiver gain would need to be reduced to stop the broadcast stations from overloading the tuner or the ADC. That, in turn, would push weak signals below the noise floor. Just to make matters

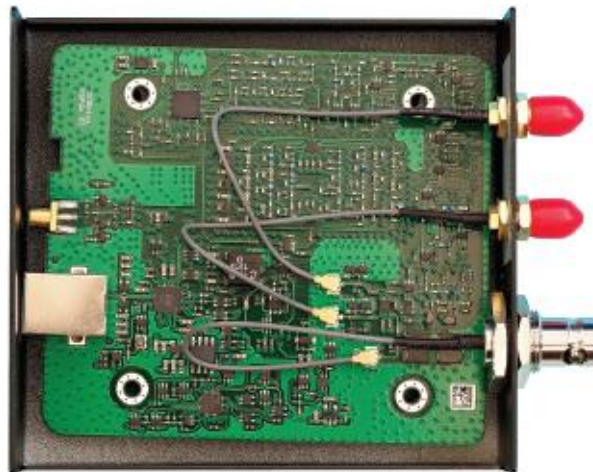


FIGURE 2: Internal view of the RSPdx.

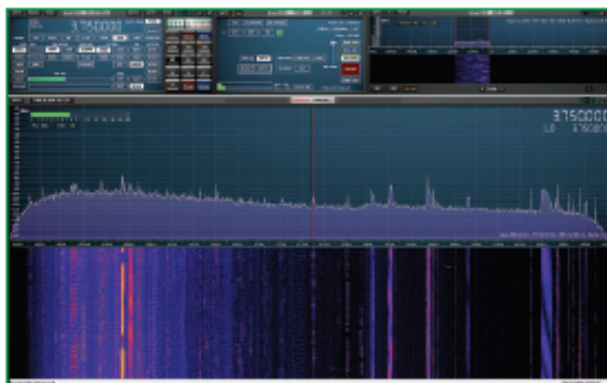


FIGURE 3: SDRUno version 1.33 running with RSPdx.

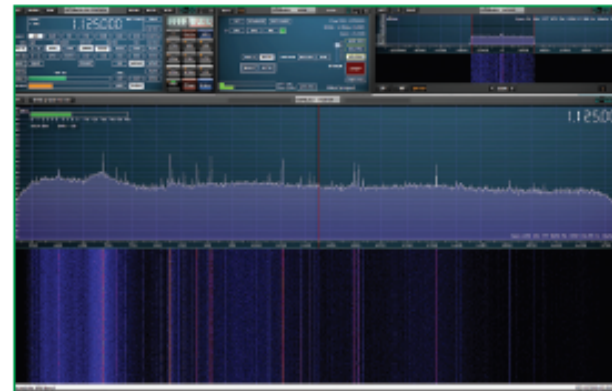


FIGURE 4: SDRUno and RSPdx in HDR mode.

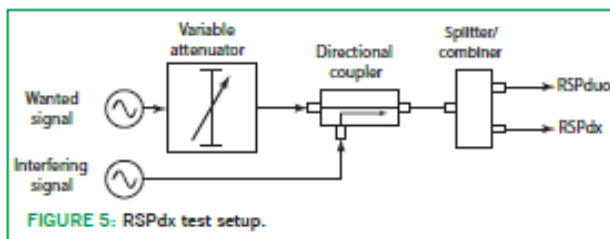


FIGURE 5: RSPdx test setup.

more complex, radio users have a wide range of interests so whilst one group may be interested in amateur band performance, another will be following broadcast stations. As a result, many receivers settle for a compromise. For the RSPdx, the SDRPlay team have concentrated on beefing-up the LF performance with changes to the antenna inputs, on-board filtering and the addition of a new HDR mode. The first important change has been the introduction of a 500kHz low-pass filter to help suppress medium wave broadcast signals. The RSPdx also features a new receive mode that they're calling HDR (High Dynamic Range) that can be used below 2MHz.

Unfortunately, SDRPlay have decided to stop publishing block diagrams and operational details of their receivers. This is to protect their designs from those unscrupulous cloners! However, SDRplay have explained that the HDR mode uses the hardware in a new way, which when combined with the new SDRUno software and revised filtering, gives improved performance below 2MHz (ie when the HDR mode is enabled via the 'HDR' band buttons). As part of the testing, I also checked the accuracy of the signal strength reporting and this was excellent on all bands and modes except 630m in HDR mode. I passed this observation to the SDRplay team and they have assured me that the calibration error will be corrected in the next SDRUno release. The new HDR modes also get a separate menu entry in SDRUno with ten HDR bands listed. I've shown these along with their frequency coverage in Table 1.

SDRUno

At the time of writing, the only SDR software that fully supports all the features of the RSPdx is SDRUno version 1.33 or later, Figure 3. SDRUno is a very capable software package but it does have a fragmented graphic user interface that comprises several panels that can be resized and moved to create your preferred layout. Once you've found the ideal setup, you can save that configuration for recall at a later date. Personally, I find a docked layout much tidier and easier to manage. As you can see from Figure 4, the Main and Rx control panel contain all the important receiver controls and in this screenshot the RSPdx is set for HDR reception. If you look at the Main panel you will see that this provides access to the antenna switching along with the important band notch filters and decimation control.

Performance

To evaluate the performance of the new RSPdx, I ran a comparison between an RSPduo and the RSPdx. Both receivers used the same antenna and were fed via a Mini-Circuits power splitter/combiner. The antenna feed also passed through a directional coupler to allow for the injection of a controlled interfering signal, Figure 5. On the HF bands and above, there was minimal difference in performance between the two models, which is as I expected. However, I did notice that the RSPdx AGC appeared to be more aggressive when a strong in-band interferer was present. Moving to the lower frequency bands, below 1.6MHz, the performance of the RSPdx was slightly better and produced results that offered a few dBs SNR improvement over the RSPduo. I then moved on to see how the RSPdx performed on LF when presented with strong MW blocking signals. For this test I set both receivers to maximum gain and produced a modulated 476kHz signal as the wanted signal. I then used a second signal generator to inject a 611kHz modulated signal to act the medium wave blocker. I first set the level of the wanted signal to achieve a 6dB SNR. I then added a MW interferer on 611kHz and increased its level whilst observing the SNR of the wanted signal.

When testing the RSPduo, ADC overload occurred with an interference level of -23dBm. As the interferer level was increased up to the maximum of 0dBm I had to continually reduce the gain of the RSPduo to avoid ADC overload. As a result, the wanted signal was soon lost in the noise. When using the RSPdx the results were very much improved and the 600kHz interferer had no obvious effect, right up to the maximum RF input level of 0dBm. It's not possible to say how much of the improvement was due to the 500kHz low pass filter or the HDR technology but it was a useful improvement for LF band operators.

Summary

The SDRPlay RSPdx is a welcome addition to the portfolio and is likely to have special appeal to those with an interest in the LF bands especially below 500kHz. The combination of the new 500kHz filter and the HDR mode gives a worthwhile improvement. The RSPdx is available from SDRPlay and other popular radio dealers. It is expected to retail at approximately £159 and my thanks to SDRPlay (www.sdrplay.com) for the supply of the review model.

Mike Richards, G4WNC
mike@photobyte.org

TX-FACTOR

OZ5WU Michael, har på et tidspunkt lavet lidt reklame for en YouTube kanal, på Facebook.

Men jeg mener at den fortjener lidt mere end bare en lille notits på Facebook, derfor lige denne lille appetitvækker ☺

Der er selvfølgelig også en hjemmeside hvor man kan få mere info <http://txfactor.co.uk/>

<https://www.youtube.com/watch?v=EaQKsmBUNhg>



amateur radio explored

TX factor er en UK kanal på YouTube dedikeret til Radioamatører.

På nuværende tidspunkt er der 25 episoder, hver på ca.50 min, så der er masser af tv at kigge på.

Der er rigtig meget om nyheder af forskellig art, i episode 25 er der både noget om software til vejrudsigter, Rfinder B1, en DMR radio som kører på wifi eller 4G, Wolfwade audioprocessor, Elecraft K4, den nye radio fra dem, og meget mere. Rigtig god YouTube kanal som giver god information om alt hvad der har med radioamatører at gøre.

På deres hjemmeside er der også en podcast som udkommer jævnligt <http://txfactor.co.uk/gb2rs-news.html>

Man skal holde ørene stive for at følge med, det foregår i et lidt hæsblæsende tempo. Da det samtidig er på engelsk, kan det måske godt give nogen lidt problemer med at forstå det hele. Men da det jo er en podcast, kan man altid spole tilbage og få det gentaget om nødvendigt ☺



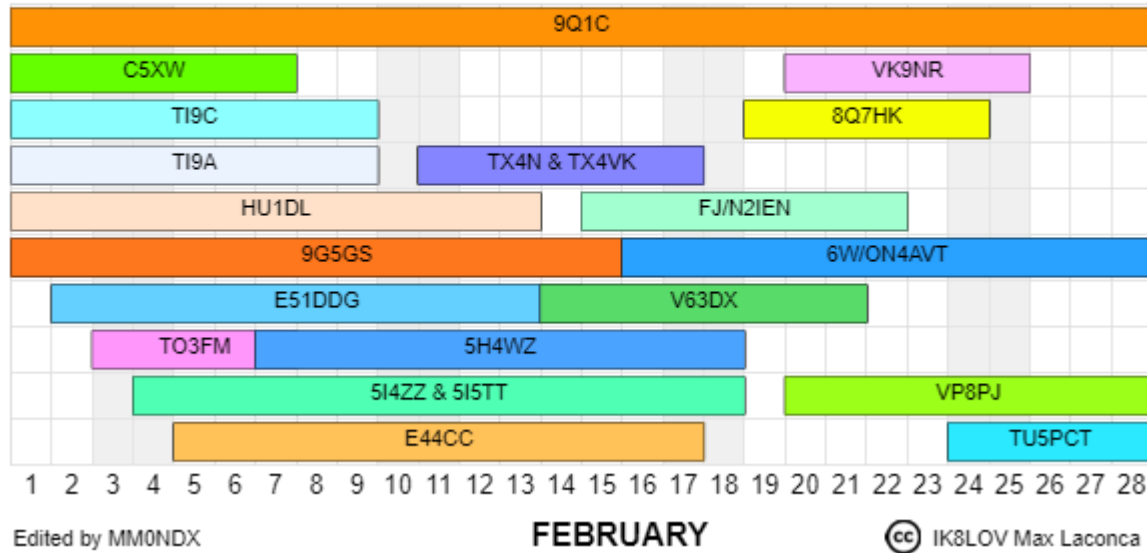
Episode 25 (TXF025)

TX date 13th December 2019

DX-PEDITIONER

DX WORLD.net FEATURED DXPEDITIONS TIMELINE

Last update: January 23, 2020



Der er en hel del at gå i gang med i februar, også en hel del som er rimelig opnåelig også uden de helt store opsætninger. Afrika er rigt repræsenteret og der er da også et par stykker over ved den sydamerikanske kyst. Disse skulle jo nok være muligt at få i loggen. Dem over på den anden side af Australien, kan måske nok blive svære.

Husk også at E44CC Palæstina, er med dansk deltagelse. Her deltager OZ1IKY, Kenneth. Vil du sikre dig et QSL kort fra dem, selvfølgelig hvis det lykkes at få dem i loggen, så kan du donere et beløb via Clublog, og på den måde få et "gratis" QSL kort. Mere info på <https://palestine2020.wordpress.com/>

Men god jagt til jer alle

9Q1C: Demokratisk Republik Congo, Afrika Operatør er IK7UXW

C5XW: Gambia, Afrikas vestkyst, operatør er G5XW, Russell

VK9NR: Nordfolk Island, Stillehavs ø, Ø for Australien. Operatører er AA4NC, Will og AA4VK, Ronn

TI9C: Cocos Island, Ø syd for Costa Rica og V for Colombia. Operatør er HK5OKY Frank og XE1B, Mark

8Q7HK: Malé Atoll, Maldiverne, N for Maldiverne, S for Indien, Operatør: JG1SXP Hiro

TI9A: Cocos Island, Samme som TI9C – bemærk det er en enmands DX-pedition, kun SSB.

TX4N & TX4VK: Fransk Polynesien, ca. midt mellem Australien og Syd Amerika. Operatører er AA4NC og AA4VK

HU1DL: El Salvador, mellem Mexico og Colombia, Se mere info her: <https://hu1dl.mydx.de/>

FJ/N2IEN: Saint Barthelemy Island en lille Ø, N for Venezuela, operatører: N2IEN, WW2DX, WW1X

9G5GS: Ghana, Afrika. Operatør er IZ4GYS Matt

6W/ON4AVT: Senegal, Afrikas Vest kyst, Operatør ON4AVT Willy

E51DDG: S. Cooks (cookøerne) Ø for Australien. Operatør VE7DS, Don

V63DX: F.S.M (Mikronesien) Ø NØ for Australien. Operatør: JA7HMZ, Sho

TO3FM: Martinique, En af Øerne N for Venezuela, Operatør: JJ2RC, Kan

5H4WZ: Pemba Island AF-063, Tanzania, Afrika's østkyst. Operatør: "Low Bands Contest Club" OM7M

5I4ZZ & 5I5TT: Zanzibar, Tanzania. 10 operatører fordelt på begge call's 5I4ZZ vil køre FT8 og FT4

VP8PJ: South Orkney Island, Ø mellem Sydamerika og Antarktisk. Se mere her: <https://sorkney.com/>

E44CC: Palæstina, Operatør er F6KOP team. Her deltagte OZ1IKY. Mere info her: <https://palestine2020.wordpress.com/>

TU5PCT: Ivory Coast, Stat I africa mellem Liberia og Ghana på vest. Operatør OK1BOA Petr, OK1FCJ Petr, og OK6D

David

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RADCOM I FEBRUAR

RadCom January 2020, Vol. 96, No. 1

rsgb | January 6, 2020

Any waveform you want—Siglent’s SDG1062X DSP-based arbitrary signal generator reviewed

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UDBREDELSFORHOLD PÅ HF/VHF/UHF

Der er sikker mange af jer læsere der ligesom jeg, har set en side med, udbredelses-forhold på nettet, eller en af de plugins til hjemmesider som udgives og vedligeholdes af NONBH Paul L Herrman.

<https://www.hamqsl.com/solar.html>

Der er sikker også mange af jer der har "lidt" problemer med at tyde alle de tal der fremkommer på disse sider. AG1YK, Steve Sant Andrea, har i QST februar 2014 skrevet en artikel om hvad disse mange oplysninger betyder for os radioamatører. Artiklen er bragt med tilladelse fra ARRL og det er deres copyright.

Første del her er fra NONBH's hjemmeside, som også giver en del forklaring på de forskellige tal. Efterfølgende kommer artiklen fra ARRL. Beklager den lidt uldne kvalitet, men det var desværre ikke muligt at få artiklen i PDF.

Understanding HF & VHF propagation conditions using data from NONBH's HAMQSL Solar Data Panel

Category	Radio Blackouts Use X-Ray	Solar Radiation Storms Use Proton Flux	Geomagnetic Storms Use K-Index/K-nT/ Aurora/Solar Wind/Bz	Band Openings Use Solar Flux (SN)	Electron Alert Use Electron Flux
Extreme	X20 (1 per cycle) Complete HF blackout on entire sunlit side lasting hours	1.0e+06 (1 per cycle) Complete HF blackout in polar regions	K=9 (nT=>500) [Aur=10+] (SW=>800) [Bz=-40 -50] (4 per cycle) HF impossible. Aurora to 40°. Noise S30+.	200-300 (SN=160-250) Reliable communications all bands up through 6m	>1.0e+03 Alert Partial to complete HF blackout in polar regions
Severe	X10 (8 per cycle) HF blackout on most of sunlit side for 1 to 2 hours	1.0e+05 (3 per cycle) Partial HF blackout in polar regions	K=8 (nT=330-500) [Aur=10+] (SW=700-800) [Bz=-30 -40] (100 per cycle) HF sporadic. Aurora to 45°. Noise S20-S30.	150-200 (SN=105-160) Excellent conditions all bands up through 10m w/6m openings	<1.0e+03 Active Degraded HF propagation in polar regions
Strong	X1 (175 per cycle) Wide area HF blackout for about an hour on sunlit side	1.0e+04 (10 per cycle) Degraded HF propagation in polar regions	K=7 (nT=200-330) [Aur=10] (SW=600-700) [Bz=-20 -30] (200 per cycle) HF intermittent. Aurora to 50°. Noise S9-S20.	90-120 (SN=35-70) Fair conditions all bands up through 15m	<1.0e+01 Normal No impacts on HF
Moderate	M5 (350 per cycle) Limited HF blackout on sunlit side for tens of minutes	1.0e+03 (25 per cycle) Small effects on HF in polar regions	K=6 (nT=120-200) [Aur=9] (SW=500-600) [Bz=-10 -20] (600 per cycle) HF fade higher lats. Aurora to 55°. Noise S6-S9.	70-90 (SN=10-35) Poor to fair conditions all bands up through 20m	<1.0e+00 Normal No impacts on HF
Minor	M1 (2000 per cycle) Occasional loss of radio contact on sunlit side	1.0e+02 (50 per cycle) Minor impacts on HF in polar regions	K=5 (nT=70-120) [Aur=8] (SW=400-500) [Bz=0 -10] (1700 per cycle) HF fade higher lats. Aurora to 56°. Noise S4-S6.	64-70 (SN=0-10) Bands above 40m unusable	<1.0e+00 Normal No impacts on HF
Active	C1 Moderate Flare Low absorption of HF signals	1.0e+01 Active Very minor impacts on HF in polar regions	K=3-4 (nT=20-70) [Aur=6-7] (SW=200-400) [Bz=0-+50] Unsettled/Active Minor HF fade higher lats. Aurora 60-58°. Noise S2-S3.		
Normal	A1-B9 No/Small Flare No or very minor impact to HF signals	1.0e+00 Normal No impacts on HF	K=0-2 (nT=0-20) [Aur=<5] (SW=200-400) [Bz=0-+50] Inactive Quiet No impacts on HF. Aurora 67-62°. Noise S0-S2.		

VHF Conditions

Aur Lat (Auroral Latitude): Indicates lowest latitude from the current Aurora Activity measurement. Text color coded for low activity, hi-latitude, & mid-latitude.
Aurora (Northern Auroral Activity): Band Closed = No Low Auroral activity. High LAT AUR = Auroral activity >60°N. MID LAT AUR = Auroral activity 60° to 30°N.
EsEU (Sporadic E - Europe): Band Closed = No Sporadic E (ES) activity. High MUF (2M only) = Cond support 2M ES. 30/70/144MHz ES = Respective band open
EsNA (Sporadic E - North America): Band Closed = No Sporadic E activity. High MUF = Cond support 2M ES. 144MHz ES = Sporadic E reported >140 MHz.
EME (Earth-Moon-Earth): Current EME degradation. Very Poor (>5.5dB), Poor (4dB), Moderate (2.5dB), Good (1.5dB), Very Good (1dB), Excellent (<1dB).
Solar Flare Probability: Provides the probability of a solar flare (in %) for the net 24 hours.
MUF (Max Usable Frequency Bar Color): No Sporadic E (ES) activity / ES reported @ 6M / ES reported @ 4M / Cond support 2M ES / ES reported @ 2M
MS (Meteor Scatter) Activity Color bar: Provides meteor activity color coded MIN to MAX conditions (see the graph below the bar).
 ©NONBH Paul L Herrman 2010

Solar Data/Propagation

Click to add to your website

Solar-Terrestrial Data

29 Jan 2020 1007 GMT

SFI 75 SN 12
 A 3 K 0
 X-Ray A9.1
 304A 96.0 @ SEM
 PF 0 Ef 4
 Aurora /n=
 Bz -2.0 SW 326.3

HF Conditions

Band	Day	Night
80n-40n	Good	Good
30n-20n	Fair	Fair
17n-15n	Poor	Poor
12n-10n	Poor	Poor

VHF Conditions

Aur Lat No Report
 Aurora Band Closed
 6n EsEU Band Closed
 4n EsEU Band Closed
 2n EsEU Band Closed
 2n EsNA Band Closed
 EME Deg Fair

Solar Flare Prb 10%

MUF ES - SEASON BREAK

MS 0 6 12 18 UTS MAX

Geomag Field INACTIVE

Sig Noise Lvl S0-S1
 MUF US Boulder NoRpt

Current Solar Image



<http://www.nonbh.com>
 Copyright Paul L Herrman 2013

Solar Banners – A Propagation Resource

NONBH's propagation banners list a slew of propagation parameters. Here's how to apply them to your ham activities.

Steve Sant Andrea, AG1YK

The web page opens and the banner catches your eye, with a burning globe of seething plasma — the source of all propagation — sitting amid a jumble of scientific slang. Since 1902, when Heaviside and Kennelly first discovered the Sun's secret of ionizing our atmosphere into radio-reflecting layers, the Sun's activities have been important to anyone with an interest in radio.

The banners you see on various websites are a window into this secret. They are prepared by Paul Herrman, NONBH. Paul served in the USMC as a radar/radio technician and has an AAS in Electronics. He is active in all forms of communications including packet (AX25), satellites, repeaters, HF, VHF, UHF, and EchoLink. He accumulates the information presented from various scientific sources and consolidates the radio-related data in his banners. Paul has 20 different types of banners on his website (www.hamqsl.com/solar.html), which are available for display on other web pages. The example shown in Figure 1 is the banner displayed on **QRZ.com**. It has 17 parameters listed, plus a list of high frequency (HF) band conditions covering 80 – 10 meters in four segments.

In all, Paul's banners can display 24 parameters in any of several different formats. Each of the 20 different banner formats lists a set of parameters. These parameters generally break down into solar parameters and geomagnetic parameters. It all looks very scientific and, perhaps a little daunting, but with some background information you will be able to understand what all this science lingo is telling you, and what you can expect from your favorite band.

Solar Parameters

The solar parameters on the banner display the levels of various types of electromagnetic and particle energies, generated by the Sun, that are striking the Earth. The Sun is the biggest, baddest boy on the block when it comes to energy production. Mr Sol throws off electromagnetic radiation from well down into the radio spectrum to well up into the X-ray spectrum. These form a continuous torrent of noise and ionizing



Figure 1 — Propagation banners such as this one can be found on the **QRZ.com** home page and other web pages. Provided by Paul, NONBH, they display the current values for a variety of propagation related factors. [Paul Herrman, NONBH, graphic]

energy. Our radiant friend also generates a deluge of particle radiation. The particle radiations that most affect propagation are the continuous streams of electrons and protons hitting the Earth's atmosphere and magnetic field — and also the occasional billion-ton blob of solar mass blown at us in those gigantic solar sneezes known as Coronal Mass Ejections (CME).

Let's take a close look at the information available on the banner shown in Figure 1.

Solar Flux Index (SFI)

The SFI is a measure of the 2800 MHz radiation (also known as the 10.7 cm flux) generated by the Sun. This value (148 in the figure) is measured each day at 1200 PST and normally varies from 60 – 300. This 2800 MHz noise doesn't directly affect propagation, but it correlates with the level of UV and X-ray radiation coming from the Sun and is more easily measured.

Sunspot Number (SN)

To the right of the SFI we have our old friend, the Sunspot Number (143). The SN is not simply the number of spots on the Sun. SN takes into account the size, number and grouping of sunspots. SN can vary from zero to 250. The higher the SN,

the higher the level of UV and X-ray radiation that is striking our atmosphere. It is the ionizing effect of this radiation that generates the D, E, and F layers. As ionospheric ionization increases so does the Maximum Usable Frequency (MUF). So when the SN and the SFI increase, they signal an increase in E and F layer ionization, which, in turn, indicates improved HF propagation conditions.

X-ray Intensity (XRY)

This is a measure of the intensity of high frequency X-rays hitting the Earth. In Figure 1 the XRY value is B6.2. The letter (B) represents the lowest class of X-ray activity with power levels measured in W/m². The number (6.2) represents the multiplier. Referring to Table 1, B6.2 translates to 6.2 × 10⁻⁶ W/m² of X-ray energy hitting the Earth.

These X-rays pass through the F layers of the ionosphere and are primarily responsible for ionization levels in the D layer and also, to some extent, the E layer. Normally, the D layer absorbs signals from 1.8–5 MHz. Signals from 7–10 MHz are attenuated, but they do pass through to the E and F layers. However, when the X-ray intensity rises to the M and X class levels, the D layer is greatly enhanced. The dayside D layer normally acts to absorb radio signals below 10 MHz, however, when it becomes enhanced by a high powered X-ray event, it can absorb radio signals throughout the HF spectrum and beyond. In extreme cases, a complete "blackout" of DX communication on the daylight side of the Earth can result, lasting for several hours.

Table 1 X-ray Intensity Scale		
Class	Strength	Radio Blackout
B	<10 ⁻⁶	None
C	10 ⁻⁶ to 10 ⁻⁵	None
M	10 ⁻⁵ to 10 ⁻⁴	R1-R2
X	> 10 ⁻⁴	R3-R5

304A

This value (164.4) is the relative strength of total solar radiation at a wavelength of 304 angstroms (or 30.4 nanometers), which is within the ultraviolet spectrum. The radiation at this wavelength is responsible for about half the ionization of the F layer. The value of 304A also correlates with the SFI, so increases in 304A tend to signal improved F layer propagation.

Interplanetary Magnetic Field (Bz)

Bz (-2.2) indicates the strength and orientation of the interplanetary magnetic field, which normally varies from +50 to -50. A positive value indicates that the interplanetary magnetic field is oriented in the same direction as the Earth's magnetic field and negative values indicate a polarity opposite to the Earth's. When the interplanetary field is negative it "fights" the Earth's magnetic field, reducing its shielding effect, and increasing the effect of solar particles (electrons and protons). This, in turn, will cause an increase in any related ionospheric and geomagnetic disturbances.

Solar Wind (SW)

Solar Wind is the speed, in kilometers per second (km/s), of the charged particles passing the Earth. The SW varies from 0 - 2000 but typically is near 375. The higher the speed, the greater the pressure exerted on the ionosphere. When the SW rises above 500 km/s it can disturb the Earth's magnetic field, which then disrupts the F layer and generally leads to a reduction in ionization and poor HF conditions.

Proton Flux (PF)

PF value (0.2) is the density of protons within the Earth's magnetic field. These protons strike the Earth's magnetic field and follow the field lines to the Earth's poles. The normal PF level is under 10. As the level increases, the increasing numbers of protons striking the Earth's magnetic field are funneled toward the poles where they increase the ionosphere's density in the polar regions. At a PF level of 10,000 the signal paths that go over the poles will begin experiencing degraded conditions. If the PF continues to rise, levels of 100,000 and above are considered an S5 — Extreme Solar Radiation Storm. At S5 levels, polar paths will experience partial to complete communications blackouts.

Note that paths that do not go over the poles are not affected by PF levels. But remember, to correctly determine if a path you want to use crosses the poles, you must use a map

based on an azimuthal equidistant projection, and not the more familiar Mercator projection. Some software programs that display RF propagation paths using Mercator projection maps indicate the location of the polar zone and/or if a propagation path is a polar path.

Electron Flux (EF)

Electron Flux (72.8) is the intensity of electrons within the Earth's magnetic field. The ionospheric effect of EF is similar to PF, with auroral path degradation occurring when EF levels reach or exceed 1000.

Signal Noise Level

This value (S1 - S2) indicates how much noise (in S-units) is being generated by the solar wind as it interacts with the Earth's magnetic field.

Coronal Mass Ejection (CME)

This value (None) is the date and time of a predicted Earth bound CME event. In Figure 1, no CME is currently predicted. When CMEs are predicted, the prediction is color coded for severity, where green is minor, yellow is moderate, and red is severe.

Geomagnetic Information

Information on the state of the Earth's geomagnetic field is important for propagation in two ways. An increasing level of disturbance in the Earth's magnetic field has a detrimental effect on the F layer, causing HF propagation to suffer. However, at the same time, the chance of auroral activity increases, so VHF auroral propagation may be enhanced.

A and K Indexes

In Figure 1, the state of the geomagnetic field is represented by the *A index* and the *K index*.

The K index (2) is derived by averaging the values of geomagnetic disturbance taken every 3 hours at eight magnetic observatories around the globe. These eight values represent the average level of disturbance in the Earth's magnetic field. The K index values are converted to a logarithmic integer value between 0 and 9. A rising K index indicates increasing instability in the Earth's magnetic field. If the value of K increases above 4, this indicates a geomagnetic storm is in progress.

The A index value (006) comes from the K index. The value of the K index taken during each 3 hour period is scaled mathematically and converted to a linear value that varies from 0 - 400. The A index is essentially the

global value of geomagnetic disturbance during the previous UTC day, whereas the K index is what is happening now.

Aurora (AUR)

The AUR value (6) is a value from 1-10 that is derived from the number of gigawatts of energy striking the polar region. As this energy level increases, the level of ionization of the F layer at the poles also increases. A rising value of AUR indicates that the auroral oval is shifting to lower latitudes and the possibility of northern/southern lights increases. The presence of an active aurora can provide improved propagation for signals from 10 meters to 70 centimeters, but it can also mean that polar path blackouts for HF can occur.

Latitude

Aurora latitude indicates the lowest latitude that an auroral event will reach.

Maximum Usable Frequency (MUF) Bdr

This is the MUF (36.11) as measured at Boulder, Colorado, at the UTC time indicated (1945).

Earth-Moon-Earth Degradation (EME Deg)

This is the amount of attenuation, in dB, along the Earth-Moon-Earth radio path. EME degradation ("Fair") is defined as Very Poor (>5.5 dB), Poor (>4 dB), Fair (>2.5 dB), Good (>1.5 dB), Excellent (<=1.5 dB).

Geomagnetic Field

The Geomag Field ("Quiet") value indicates how quiet or active the Earth's magnetic field is based on the K index value. The scale has nine levels, varying from Inactive to Extreme Storm. When Major, Severe, or Extreme Storm levels are reached, the HF bands can experience blackouts and auroral events will occur.

The Physics Pileup

As you can probably tell, there is a lot going on up there. The Sun and the Earth interact in a messy confusion of physics that is similar to the pileup for a rare DX station. I hope this article has taken some of the awe and mystery out of the propagation banners you find on various web pages and has given you a few clues to understand the mystery of our ionosphere.

Steve Sant Andrea, AG1YK, is an assistant editor at QST. He can be reached at ag1yk@arrl.org.

PSK CONTEST

Den russiske "Digitale Radio Club" inviterer alle radioamatører World Wide til at deltage i den:

18th Russian WWPSK Contest

Det starter lørdag den 15. februar kl. 12.00 UTC og frem til søndag den 16. februar kl.11:59 UTC
Modulations typer er BPSK31, BPSK63, BPSK125.

Her har du muligheden for at få pudset PSK modemet og softwaren af, så bare klø på ☺

Den originale invitation ser således ud:

Dear Fellow Radio Amateurs,

The Russian Digital Radio Club has the honour to invite the radio amateurs all over the world to participate in the 18th Russian WW PSK Contest.

We invite all fans of digital modes to take part in contest from 12.00 UTC on Saturday 15th February till 11:59 UTC on Sunday 16th February, 2020.

Types of modulation: BPSK31, BPSK63, BPSK125.

Awards in electronic type will be awarded to WINNERS, PRIZEWINNERS and other PARTICIPANTS under condition of carrying out not less than 30 CFM QSO.

All certificates for contests and days of activity, since 2019, are loading on site <http://awards.rdrclub.ru/certificate/>

For more info please visit Russian WW PSK Contest Rules: <http://www.rdrclub.ru/russian-ww-psk-contest/49-rus-ww-psk-rules>

All logs must be sent no later than 5 days after the contest - 23:59 UTC on 21st February 2020.

73! - Russian Digital Radio Club -



JEG HAR IKKE TID...

MIN TIPOLDEFAR arbejdede 12 timer daglig – også lørdag. Det var en arbejdsuge på 72 timer. Ved siden af passede han en have med et lille hus, var kasserer i skyttelaug, strålefører ved det lokale brandværn, Tenor og nodeskriver i sangforeningen. Han klippede selv sine 6 børn, forsålede familiens fodtøj, kløvede 8 kubikmeter brænde til vinteren samt lavede det meste husgeråd selv.

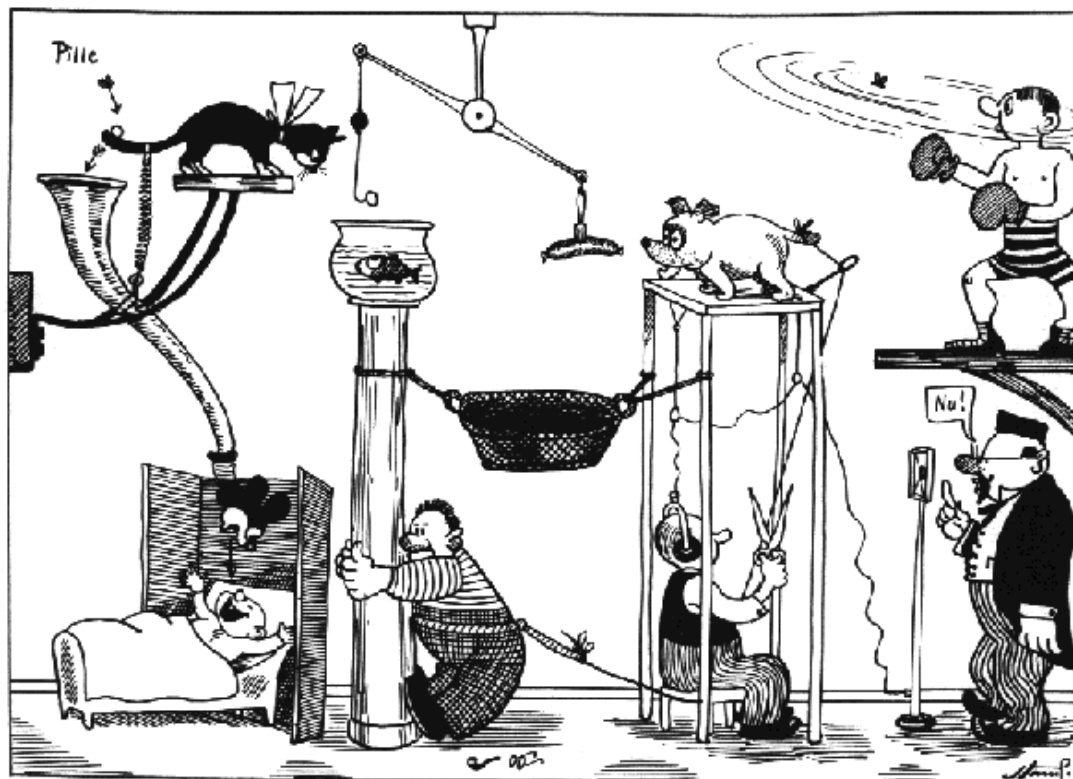
MIN OLDEFAR var kommet ned på en arbejdsuge på 54 timer. Han overtog haven og var også strålefører. Ligeledes var han medlem af skyttelaug, og i sangforeningen var han baryton, men han havde ikke tid til at være kasserer og nodeskriver. Han klippede heller ikke sine 4 børn, og hans brændehugst indskrænkede sig til 1 kubikmeter, fordi han var begyndt at fyre med kul. Husgeråd var noget man købte.

MIN BESTEFAR arbejdede 48 timer om ugen. Også han var havemand og medlem af skyttelaug. Men han havde ikke tid til sangforeningen og brandmandspjæt. Hans 2 børn gik til frisøren. Brændsels hugst til vinteren? Nej men han syslede med husflid.

MIN FAR var traditionstro og derfor medlem af skyttelaug. Men han kom der aldrig. Han havde opgivet familiehaven, den betaler sig ikke længere. Han har ikke hjemmeværende børn. Brænde og kul til vinteren? Næh, man har fået elvarme. Hvordan kam man ellers få tid til noget som helst i vor forjagede verden, han arbejder jo trods alt 42 timer om ugen.

OG JEG – jeg har overhovedet ikke tid til noget. Ikke tid til at synge, højst lidt brummen, og slet ikke noget med frivilligt arbejde. Hvordan skulle det dog kunne lade sig gøre, med en så opslidende lang arbejdstid som 37 timer om ugen. Jeg overvejer at gå på efterløn for at tage mig af MIN SØN, der er ungdomsarbejdsløs.....

Denne lille artikel var at finde i en avis i 60'erne, men er vist stadig aktuel anno 2020



Nyhedsbrevet er et månedligt tidsskrift, som kun udkommer elektronisk og som udgives af OZ3EDR. Ansvarshavende redaktør er OZ1DCZ, Carsten Kobborg.

Kunne du tænke dig at modtage den direkte, i din mail boks, så send en mail til oz3edr@gmail.com, skriv "Nyhedsbrev abonnent" i emnefeltet, og du vil efterfølgende modtage den direkte.

SIMPLE RETTIGHEDER:

Husk Uddrag, billeder eller andet fra dette nyhedsbrev, må gerne bruges/Offentliggøres, med undtagelse af udenlandske artikler, på betingelse af at:

- Der er klar kildeangivelse.
- At det tydeligt fremgår hvem der har skrevet originalartiklen.
- Hele artikler må kun bruges efter indgået aftale med forfatteren.

Udenlandske artikler, brugt i dette nyhedsbrev, hvad enten de er oversatte eller originale, må under ingen omstændigheder genbruges, heller ikke dele heraf, uden personlig aftale med forfatteren.

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HUSK! Nyhedsbrevet kan altid findes på <http://oz3edr.dk/?Nyhedsbrev>



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Mødeaften: torsdag

QRV på 145.350 MHz

Har du noget du kunne tænke dig at få omtalt i nyhedsbrevet, eller har du ønsker til emner vi kunne tage op, så tøv ikke, men send dem til OZ3edr@gmail.com
